Curriculum vitae: Elisa Marenzi

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WORK EXPERIENCE

01/03/2023 – present: **Assistant Professor**
University of Pavia – Department of Electrical, Computer and Biomedical Engineering, via Ferrata 5, 27100, Pavia (PV), Italy

07/01/2020 – 28/02/2023: **Systems Amministrator**
University of Pavia – Information Systems Area (Area Sistemi Informativi - ASI), Office for Cloud & Systems, via Ferrata 5, 27100, Pavia (PV), Italy

01/12/2017 – 30/11/2019: **Post-doc**
University of Pavia – Department of Brain and Behavioral Sciences (DBBS), Neurocomputation Laboratory, via Forlanini 6, 27100, Pavia (PV), Italy

01/12/2017 – 30/11/2019: **Post-doc**
University of Pavia – Department of Electrical, Computer and Biomedical Engineering, via Ferrata 5, 27100, Pavia (PV), Italy

EDUCATION

01/11/2010 – 31/10/2013; degree earned on 10/02/2014: **PhD in Bioengineering and Bioinformatics**
University of Pavia – Department of Electrical, Computer and Biomedical Engineering, via Ferrata 5, 27100, Pavia (PV), Italy
Thesis title: Study of pressure ulcers due to prolonged sitting: design and development of an interface pressure monitoring device and identification of a prevention strategy
Supervisors: Dr. Gian Mario Bertolotti; Prof. Giovanni Danese

01/10/2007 – 26/04/2010: **Master Degree in Biomedical Engineering**
University of Pavia – via Ferrata 5, 27100, Pavia (PV), Italy
Thesis title: Design and development of an acquisition an monitoring system able to control a matrix of capacitive sensors
Supervisor: Prof. Remo Lombardi

01/10/2004 – 13/12/2007: **Bachelor Degree in Biomedical Engineering**
University of Pavia – via Ferrata 5, 27100, Pavia (PV), Italy
Thesis title: Graphic interface to formally express medical guidelines' rules
Supervisor: Prof.ssa Silvana Quaglini

RESEARCH INTERESTS

- High Performance Computing (HPC) to optimize and parallelize algorithms for image processing of both traditional RGB and hyperspectral ones;
- Design and development of embedded systems for portable and wearable devices to monitor physiological and biological parameters;
- signal processing in the fields of rehabilitation, automotive and ergonomics;
- modelling and simulation of cerebellum neuronal circuits, with focus on the study of interneuron connectivity.

AWARDS

- *05/2016:* Custom Computing & Programmable Systems Laboratory accredited as **NVIDIA GPU Research Center**
- *12/09/2014:* **ETIC Award** (Ethics and ICT - Etica e Tecnologie dell'Informazione e della Comunicazione), promoted by Rotary and AICA (Italian Association for ICT - Associazione Italiana per l'Informatica e il Calcolo Automatico) for PhD thesis
- *14/06/2012:* **Lifebility Award** – Social Technological Innovation, Bioengineering and Biotechnology sector, promoted by Lions International
- *11/06/2012:* **Third Prize at the Research & Innovation for the Industry Contest**, to promote innovative projects for companies of the industrial sector of Pavia region, promoted by Confindustria Pavia – the local

branch of the main Italian Association representing Manufacturing and Service Companies, with the project "Monitoring system for the interface pressure during seated posture, with applications in the automotive, ergonomics and clinical fields"

- *08/02/2012: **Second Prize as Best Student Paper Award**, sponsored by the IEEE Instrumentation and Measurement Society for the paper presented at the Sensors Applications Symposium (SAS 2012, Brescia)*
- *06/2010: **Master Degrre Award in memory of Prof. Domenico Dotti**, for master theses developed in the fields of microprocessor systems, bioengineering instrumentation and High-Performance Computing for the simulation of physical systems.*

SPEAKER AT INTERNATIONAL CONFERENCES
- 2022 11th Mediterranean Conference on Embedded Computing (MECO), Budva, Montenegro, 7-10 June 2022
- 2018 IEEE Global Engineering Education Conference (EDUCON), Santa Cruz de Tenerife, Spain, 17-20 April 2018
- 25th Euromicro International Conference on Parallel, Distributed and Network-based Processing, PDP 2017, Saint Petersburg, Russia, 6-8 March 2017
- International Conference on Physiological Computing Systems (PhyCS), Lisbon, Portugal, 7-9 January 2014
- IEEE EUROCON 2013, Zagabria, Croazia, 1-4 July 2013
- Sensors Applications Symposium (SAS), Brescia, Italy, 7-9 February 2012

RESEARCH ACTIVITIES AND PROJECTS
- STRATUM (3D Decision Support Tool for Brain Tumour Surgery): EU Project funded under the Horizon 2020 programme, in partnership with the University of Las Palmas de Gran Canaria (Spain), OPTOMIC ESPAÑA S.A. (Spain), Eindhoven University of Technology (Netherland), Barcelona Supercomputing Center (Spain), Fundación Canaria Instituto de Investigación Sanitaria de Canarias – FIISC (Spain), Region Stockholm – RS (Sweden), SAS UPMEM (France), Polytechnic University of Madrid (Spain), Servicio Madrileno de Salud (Spain), Rheinland-Pfalzische Technische Universitat (Germany), European Citizen Science Association – ECSA (Germany)
- The Human Brain Project (HBP) - SP6 SGA2: European Future and Emerging Technologies (FET) Flagship Project, in partnership with EPFL (Switzerland), CNRS (France), CNR (Italy), KTH (Sweden), Forschungszentrum Jülich (Germany), CINECA (Italy), Institute of Experimental Medicine (Hungary)
- TheDALUS - The Disabled Assisted Living for University Students: project funded by the Lombardy region, in collaboration with the local companies DaisyLabs S.r.L. (Italy), AGEvoluzione S.r.L.S. (Italy)
- Evaluation and development of the national standard for the interoperability between show manufacturing machineries, for ASSOMAC, the National Association of Italian Manufacturers of Footwear, Leathergoods and Tanning Technologies (Associazione Nazionale dei Costruttori Italiani di Tecnologie per Calzature, Pelletteria e Conceria)
- High Performance Computing for Image Processing in collaboration with the University of Las Palmas de Gran Canaria and the University of Extremadura
- Evaluation of cutaneous and vascular risk due to prolonged and/or lying, in collaboration with the Rehabilitation Center Santa Maria alle Fonti, Don Gnocchi Foundation (Italy)
- REFLECT (REsponsive FLExible Collaborating ambienT) Project – EU FP7, in partnership with Ferrari S.p.a., Fraunhofer FIRST, Philips, LMU Munich, LJMU Liverpool, Università di Groningen e Institut Mihajlo Pupin

EDITORIAL ACTIVITIES
- Handling editor and reviewer for the Elsevier Microprocessors and Microsystems (MicPro) Journal and Reviewer Editor for the Frontiers in Computational Neuroscience Journal
- Co-chair of the Special Session on Advanced Systems for Health Wellness and Personal Monitoring (ASHWPA) at the 2024 Euromicro Conference Series on Digital System Design (DSD)
- Scientific Committee Member and reviewer for the Euromicro International Conference on Digital Systems Design (DSD) and the Euromicro International Conference on Parallel, Distributed and Network-Based Processing (PDP)
- Reviewer for Mediterranean Conference on Embedded Computing (MECO)